

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1-14 in accordance with the following:

1. (CURRENTLY AMENDED) A wavelength division multiplexed (WDM) network system, comprising:
 - an optical ~~wavelength division multiplexed (WDM)~~ transmission path;
 - a plurality of sub-networks, each having an IP address and accommodating a client; and
 - a plurality of WDM nodes, each corresponding to each of the plurality of sub-networks respectively and connected with the optical wavelength division multiplexed transmission path, wherein each of the plurality of WDM nodes ~~includes~~ comprises:
 - a wavelength converting unit ~~for~~ controlling oscillation frequencies in conformity with ~~a destination an IP address for which the communication destination is identified by an IP address of a destination sub-network;~~ an IP address for which the communication destination is identified by an IP address of a destination sub-network; and
 - a cross-connecting unit for cross-connecting ~~the a~~ route directed to an adjacent WDM node for connecting with the ~~communication destination~~ sub-network.
2. (CURRENTLY AMENDED) The WDM network system according to claim 1, wherein:
 - each of the WDM nodes includes a routing table ~~for~~ storing the IP address of the corresponding sub-network, a WDM node of an upper order of the sub-network, a cross-connection ID identifying the path, a wavelength used and information of the WDM node to which the main signal is first sent when reaching the target sub-network using a predetermined path, and wherein
 - the control of the oscillation frequency by the wavelength converting unit and the cross-connecting of the route are conducted by referring to the routing table.
3. (CURRENTLY AMENDED) The WDM network system according to claim 2, wherein:
 - when an IP address of a sub-network in which a client is accommodated is

notified from the client issuing a request for connection, the corresponding node registers the IP address of the sub-net work into the routing table, and ~~wherein~~

each WDM node exchanges the IP address information of the sub-network retained in the routing table with adjacent nodes.

4. (CURRENTLY AMENDED) The WDM network system according to claim 1, wherein:

the oscillation of wavelengths and the settings of cross-connection are started/ended and defined/erased in response to the occurrence/disappearance of traffic from the sub-network.

5. (CURRENTLY AMENDED) The WDM network system according to claim 1, wherein:

the wavelength converting unit executes one-to-multiple communication by converting a wavelength into a plurality of wavelengths in response to a request for connection from one ~~(4)~~ client.

6. (CURRENTLY AMENDED) The WDM network system according to claim 2, wherein:

a plurality of selectable paths are set in a cross-connection ID identifying the path of the routing table, with the priority being registered for each path.

7. (CURRENTLY AMENDED) The WDM network system according to claim 6, wherein:

the priority is set based on the quality of the WDM signal at the receiving terminal and can be updated in response to disconnection or recovery of the path.

8. (CURRENTLY AMENDED) A WDM node, a plurality of which each corresponding to a plurality of sub-networks and connected to optical wavelength division multiplexed (WDM) transmission paths in a WDM network system for connecting the plurality of sub-networks each having an IP address and accommodating clients, through the optical wavelength division multiplexed transmission paths, the WDM node comprising:

a wavelength converting unit ~~for controlling an oscillation frequency in conformity with the destination an IP address by which the communication destination is identified by an IP address of a destination sub-network;~~ and

a cross-connecting unit for cross-connecting a route directed to an adjacent

WDM node for connecting with the ~~communication~~ destination sub-network.

9. (CURRENTLY AMENDED) The WDM node according to claim 8, further comprising:

a routing table for storing the IP address of the corresponding sub-network, a WDM node of an upper order of the sub-network, a cross-connection ID identifying the path, a wavelength used and information of the EDM node to which the main signal is first sent when reaching the target sub-network using a predetermined path, and wherein

the control of the oscillation frequency by the wavelength converting unit and the cross-connecting of the route are conducted by referring to the routing table.

10. (CURRENTLY AMENDED) The WDM node according to claim 9, wherein:
when an IP address of a sub-network in which a client is accommodated is notified from the client issuing a request for connection, the WDM node registers the IP address of the sub-network ~~work~~ into the routing table, and wherein

the WDM node exchanges the IP address information of the sub-network retained in the routing table with adjacent nodes.

11. (CURRENTLY AMENDED) The WDM node according to claim 8, wherein:
the wavelength converting unit executes one-to-multiple communication by converting a wavelength into a plurality of wavelengths in response to a request for connection from one ~~(1)~~ client.

12. (CURRENTLY AMENDED) The WDM node according to claim 8, wherein:
the oscillation of wavelengths and the settings of cross-connection are started/ended and defined/erased in response to the occurrence/disappearance of traffic from the sub-network.

13. (CURRENTLY AMENDED) The WDM node according to claim 9, wherein:
a plurality of selectable paths are set in a cross-connection ID identifying the path of the routing table, with the priority being registered for each path.

14. (CURRENTLY AMENDED) The WDM node according to claim 13, wherein:
the priority is set based on the quality of the WDM signal at the receiving terminal and can be updated in response to disconnection or recovery of the path.